

# SCRAG FOREST STEWARDSHIP PLAN

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This (is a) forest management plan is developed under current Federal and State forest stewardship guidelines.

**Date Prepared:** 11/09  
**Plan Time Frame:** 2010 - 2012  
**Property Owner(s):** Town of Waitsfield  
**Address:** Nine Bridge Street  
Waitsfield, VT  
05673  
**Telephone:** 802-496-2218  
**Email:**  
**Property Address:** Just beyond south end of Bowen Road.  
**(if applicable)**  
**Legal description or directions to site:** The "Scrag Mountain" parcel is located just south of Scrag Mountain on the Northfield Mountain Range, which lies between the towns of Waitsfield and Northfield.  
**Property Code:** Municipal Forest  
**Prepared By:** Russ Barrett  
**Company:** Dept. FP&R, State of Vermont  
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Barre, VT  
05641  
**Telephone:** 802-476-0172  
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**Approvals:**

**Landowner:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**Preparer:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**Approving Agency:** \_\_\_\_\_ **Date:** \_\_\_\_\_

# GENERAL INFORMATION

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## Landowner Assessment

**Description of resources and level of interest from the landowner:** As with any municipality, time, interest, and energy spent on the Town Forest can be substantial. However interest, time and energy tend to increase and decrease depending on makeup and interest of individual members of the Select Board and Conservation Commission.

**Landowner's goals for the property:**

- Develop hiking trails
- Create viewscapes or vistas
- Promote hunting opportunities
- Provide both local and broad-scale variation in the overstory canopy
- Maintain a closed overstory canopy with a dense understory
- Create new openings in the forest
- Preserve existing openings in the forest
- Allow Visual Access
- Leave many big trees
- Promote vegetation that displays colorful foliage and/or fruit in Autumn
- Generate periodic income from timber production
- Increase the richness of wildlife species
- Protect water resources
- Protect wetlands
- Protect riparian zones
- Enhance biological diversity on a local level
- Restore native ecosystem elements
- Discourage or eliminate exotic elements

**Goal comments:**

## General Property Information

**Total land area:** 645.0 Acres

**Total number of stands/mgmt units:** (9) Nine

**Region/subsection or ecosystem type:** Northern Green Mountain biophysical region

**General property description:** The Scrag Mountain Town Forest is approximately 645 acres in size and occupies a visible location on the mountainous

	landscape between Waitsfield and Northfield. Approximately 154 acres of the parcel are above 2500 ' in elevation.
<b>Description of surrounding properties:</b>	To the north and south, the ownership pattern is characterized by two relatively large parcels of high elevation woodland. To the east, properties are still wooded but of smaller acreage. To the west, properties are of even smaller acreage and are a mix of wooded and residential sites.
<b>Soils information:</b>	Soil Map and descriptions attached.
<b>Management access:</b>	Present access for most management purposes would be via the Bowen Rd., which is generally southwest of the Scrag (Town) Forest. (Bowen Rd.) This would provide good access for most of Stands 1 and 4. Stands 2 and 3 will have to be accessed via Monti Rd. on the Northfield side of the ridge. The Town should look into acquiring a right-of-way to Monti Rd. Possible access to the northern section of Stand 1 would be via Sugar Glen Rd. and would depend on the cooperation of neighboring landowners.
<b>Presence of threatened and endangered species:</b>	No threatened/endangered species have been mapped on or near the Scrag Mountain parcel
<b>Cultural importance:</b>	The general area history is that of a working landscape, with a mix of agricultural and forest product land uses. Part of the northeasterly corner of the tract, (east end of stand #2) appears to have been cleared for agricultural purposes, but the balance of the land has a history of forest product harvesting.
<b>Map information:</b>	A map based on an aerial photograph is included in the plan. Items with an asterisk are shown on the map: <ul style="list-style-type: none"> <li>* North arrow (required)</li> <li>* Scale bar (required)</li> <li>* Legend (required)</li> <li>* Locator map</li> <li>* Stand boundaries</li> </ul>

# EXISTING CONDITIONS FOR STAND '1'

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**Land area:** Land area: 195 Acres  
**Land use history:** Woodland, never cleared for agriculture, and periodically harvested for the products salable at the time.  
**Forest Type:**  
- **Existing** Northern Hardwoods  
- **Potential** Northern Hardwoods  
**Successional trend:** Generally, a good-quality stand of log size northern hardwoods, considering the relatively high elevation and affects of the 1998 ice event. Species makeup is 67% sugar maple, 12% beech, 9% yellow birch and 5% red spruce.  
**Forest health:** Stand health is generally good. Ice damage ranges from light to heavy depending on elevation, species type and exposure.  
**Site quality:** Site index is 62 for sugar maple. Site 1 and 2 in most of the stand with ledge outcrop and exposed knolls being site 3.

**Approximate age:** 80                      **Size class:** Small Sawlogs (11.5 - 17.5")  
**Trees per acre:** 114                      **Mean Stand Diameter:** 10 in.  
**Basal Area (BA):** 98                      **Acceptable BA:** 59  
**Growth Rate:** Not measured      **Timber Quality:** Medium

**Stocking:** Stocking is adequate - between the A and B lines on the northern hardwood stocking guide

**Stand Volume:**

**Habitat and wildlife use:** Good habitat for upland species including deer, bear, bobcat and song birds.

**Recreational opportunities:** Good for most types of extensive recreation including hiking, hunting and bird watching.

**Potential for timber production:** Fair to good potential for growing high quality wood products. Limiting factors are elevation and exposure.

**Potential for other uses:**

**Water quality issues:** Stand 1 is generally well drained, with one major stream , several intermittent streams and several areas that are

seasonably wet.  
**Important natural features:** Scenic upland stream, with at least two small gorges, flows through stand 1.

## MANAGEMENT PLANS FOR '1'

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**Landowner's objectives for this stand:** Grow timber for periodic income; enhance wildlife habitat and use for extensive recreation.

### Silvicultural Prescription

**Recommended silvicultural system:** Uneven-aged management, favoring sugar maple, yellow birch, white ash and red spruce. Target maximum diameter is 24 inches. The desired cutting cycle is 22 years.

**Details of the silvicultural prescription:** Conduct an un-even aged harvest within the next 5 to 10 years. Density is not critically high, but there is a chance of losing some valuable high risk trees if harvest is delayed too long. Use a combination of single tree and group selection as marked by a forester to meet residual goals for basal area structure, tree condition and regeneration.

### Planned Activities

**2011:** GPS existing trails

**Priority:** 2

**2012:** Uneven-aged harvest as marked by forester

**Priority:** 1

## EXISTING CONDITIONS FOR STAND '2'

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<b>Land area:</b>	Land area: 53 Acres	
<b>Landuse history:</b>	Cut heavily in 2000 - ice damage salvage	
<b>Forest Type:</b>		
- Existing	Northern Hardwoods	
- Potential	Northern Hardwoods	
<b>Successional trend:</b>	This stand was cut heavily to salvage ice damaged trees around 2000.	
<b>Forest health:</b>	Fair to good	
<b>Site quality:</b>	Fair to good - site 2 and 3	
<b>Approximate age:</b>	10	<b>Size class:</b> Saplings (1 - 5.5")
<b>Trees per acre:</b>		<b>Mean Stand Diameter:</b> N/A
<b>Basal Area (BA):</b>		<b>Acceptable BA:</b> Not measured, diameters too small
<b>Growth Rate:</b>		<b>Timber Quality:</b> Low
<b>Stocking:</b>	Regenerating to a mix of hardwood species	
<b>Stand Volume:</b>		
<b>Habitat and wildlife use:</b>	Good for early successional dependent wildlife such as ruffed grouse, snowshoe hare and various song birds. Much evidence of use and browse by moose.	
<b>Recreational opportunities:</b>	Fair to good for hunting and other forms of extensive recreation, but limited due to inconvenient access.	
<b>Potential for timber production:</b>	Fair to good	
<b>Potential for other uses:</b>	Limited, due to difficulty of access, but suitable as a component of general open-space qualities.	
<b>Water quality issues:</b>	None noted	
<b>Important natural features:</b>	None noted	

# MANAGEMENT PLANS FOR '2'

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**Landowner's objectives for this stand:** Grow timber for periodic income, enhance wildlife habitat and use for extensive recreation.

## Silvicultural Prescription

**Recommended silvicultural system:** Uneven-aged management, favoring sugar maple. Target maximum diameter is 22 inches. The desired cutting cycle is 22 years.

**Details of the silvicultural prescription:** No activity for this planning period

## Planned Activities

There are no activities for this stand.

## EXISTING CONDITIONS FOR STAND '3'

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<b>Land area:</b>	Land area: 98 Acres	
<b>Landuse history:</b>	This stand does not appear to have had a harvest for about 40 years. Traces of old roads were noted, but no recent stumps.	
<b>Forest Type:</b>		
- Existing	Northern Hardwoods	
- Potential	Northern Hardwoods	
<b>Successional trend:</b>	Generally a mature, but ice damaged stand of sawlog size northern hardwoods. Species composition is: 62% sugar maple, 16% beech, 15% yellow birch and associated species. Regeneration is generally abundant, but very heavy to beech with some red spruce and yellow birch. Up to 15 % of this stand may be too steep for traditional harvesting equipment.	
<b>Forest health:</b>	Moderate beech bark disease and varying degrees of ice damage.	
<b>Site quality:</b>	Site index is 62 for sugar maple. Fair to good site for growing hardwoods. Elevation, exposure and rockiness would be the limiting factors.	
<b>Approximate age:</b>	90	<b>Size class:</b> Small sawlogs (11.5 - 17.5")
<b>Trees per acre:</b>	114	<b>Mean Stand Diameter:</b> 11 in.
<b>Basal Area (BA):</b>	77	<b>Acceptable BA:</b> 44
<b>Growth Rate:</b>	Not measured	<b>Timber Quality:</b> Medium
<b>Stocking:</b>	Adequate stocking - between A and B lines on northern hardwood stocking guide. Acceptable growing stocking is low, primarily because of ice damage.	
<b>Stand Volume:</b>		
<b>Habitat and wildlife use:</b>	Good for upland species such as deer, moose, bear, bobcat and forest dwelling song birds.	
<b>Recreational opportunities:</b>	Good for extensive forms of recreation such as hiking, hunting and bird watching.	
<b>Potential for timber</b>	Fair to good site for timber production. Tree quality and	

**production:** height were good considering the 2200' average elevation of this stand. Limiting factors would be elevation, exposure and rockiness.

**Potential for other uses:** Limited, due to difficult access, but suitable as a component of larger open-space qualities.

**Water quality issues:** Few water quality issues. Streams present are relatively small and most are intermittent.

**Important natural features:** No important natural features noted.

## MANAGEMENT PLANS FOR '3'

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**Landowner's objectives for this stand:** Manage timber for periodic income, enhance wildlife habitat and use for extensive recreation

### Silvicultural Prescription

**Recommended silvicultural system:** Uneven-aged management, favoring sugar maple, yellow birch and red spruce. Target maximum diameter is 22 inches. The desired cutting cycle is 22 years.

**Details of the silvicultural prescription:** Conduct an un-even aged harvest within the next 5 to 10 years. The stand density is not critically high, but the possible loss of valuable, high risk trees warrants an early entry. Because this will be a partial salvage cut the residual basal area will be near C line.

### Planned Activities

**2012:** Salvage/uneven-aged treatment  
**Priority:** 1

## EXISTING CONDITIONS FOR STAND '4'

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**Land area:** Land area: 60 Acres  
**Landuse history:** Clear-cut 50 years ago.  
**Forest Type:**  
- **Existing** Mixedwood - paper birch/spruce  
- **Potential** Northern Hardwoods  
**Successional trend:** This is a hardwood/spruce stand that was clear-cut approximately 50 years ago. Birch and maple poles are mixed with spruce, fir and maple saplings. Many of the birch poles have blown over or are victims of the 1998 ice storm. Excellent growth was noted on the released spruce and maple stems.  
**Forest health:** Ice damage and blow down of pole size white birch.  
**Site quality:** Site index is 48 for red spruce. Fair to good - soil similar to stand 1.

**Approximate age:** 50                      **Size class:** Saplings (1 - 5.5")  
**Trees per acre:** 1028                      **Mean Stand Diameter:** 5 in.  
**Basal Area (BA):** 122                      **Acceptable BA:** 76  
**Growth Rate:** Not measured      **Timber Quality:** Low

**Stocking:** Adequate stocking - between A and B lines on the mixedwood stocking guide

**Stand Volume:**

**Habitat and wildlife use:** Good for upland species such as deer, moose, snowshoe hare, ruffed grouse and some species of song bird. Heavy moose sign was noted in the upper elevations of this stand.

**Recreational opportunities:** In the future this stand has potential for extensive recreation such as hiking, hunting and bird watching. It is rather dense with quite a number of downed trees at present which would limit some activities for a few years.

**Potential for timber production:** Fair to potential for timber production. It may be another 30 to 40 years before this stand could be harvested.

**Potential for other uses:** Limited, due to difficult access, but suitable as a component of larger, open-space qualities.

**Water quality issues:** Few concerns about water quality issues in this stand. Only (2) two small streams were noted.

**Important natural features:** No important natural features noted in this stand

## MANAGEMENT PLANS FOR '4'

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**Landowner's objectives for this stand:** Manage timber for periodic income, wildlife enhancement, extensive recreation and biological diversity. Over time this stand may tend to be more hardwood and less mixedwood. For species and habitat diversity, an effort should be made to maintain this stand as a mixed wood stand.

### Silvicultural Prescription

**Recommended silvicultural system:** Uneven-aged management, favoring red spruce, sugar maple and yellow birch. Target maximum diameter is 20 inches. The desired cutting cycle is 22 years.

**Details of the silvicultural prescription:** No activity for this planning period.

### Planned Activities

There are no activities for this stand.

# EXISTING CONDITIONS FOR STAND '5'

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**Land area:** Land area: 124 Acres  
**Landuse history:** Little or no cutting in most of this stand for over 40 years.  
**Forest Type:**  
- **Existing** Spruce-Hardwood - Special Treatment Area  
- **Potential** Spruce-Hardwood  
**Successional trend:**  
**Forest health:** Not field checked  
**Site quality:** Poor to fair

**Approximate age:** **Size class:**  
**Trees per acre:** **Mean Stand Diameter:**  
**Basal Area (BA):** **Acceptable BA:**  
**Growth Rate:** **Timber Quality:** low

**Stocking:**  
**Stand Volume:**

**Habitat and wildlife use:** Easements allow for some cultural work to improve wildlife habitat where it may be threatened for one reason or another.

**Recreational opportunities:** Good for extensive forms of recreation such as hiking and bird watching. The terrain is generally too steep and remote for hunting, although that may attract a few hardy souls. Trails to Scrag Mountain pass through this stand.

**Potential for timber production:** Easements restrict timber harvesting

**Potential for other uses:**

**Water quality issues:** Beaver pond and shallow emergent marsh are concerns, but are VLT protected by easements.

**Important natural features:** Stand 5 contains approximately 1500' of ridgeline on the Northfield Mountains and comes near but does not include the peak of Scrag Mountain. Approximately 65% of this stand is above 2500' in elevation. It also includes seeps, a beautiful beaver pond and a shallow emergent marsh.

# MANAGEMENT PLANS FOR '5'

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**Landowner's objectives for this stand:** Leave in natural state except for the possibility of wildlife habitat protection.

## Silvicultural Prescription

**Recommended silvicultural system:**

**Details of the silvicultural prescription:** No activity for this planning period

## Planned Activities

<b>2010:</b>	Locate corners and mark boundaries
<b>Priority:</b>	1
<b>2011:</b>	GPS existing trails
<b>Priority:</b>	2

# EXISTING CONDITIONS FOR STAND '6'

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**Land area:** Land area: 5 Acres  
**Landuse history:**  
**Forest Type:**  
- **Existing** Red spruce  
- **Potential** Red spruce-northern hardwood  
**Successional trend:**  
**Forest health:** Not field checked  
**Site quality:**

<b>Approximate age:</b>	<b>Size class:</b>
<b>Trees per acre:</b>	<b>Mean Stand Diameter:</b>
<b>Basal Area (BA):</b>	<b>Acceptable BA:</b>
<b>Growth Rate:</b>	<b>Timber Quality:</b>

**Stocking:**  
**Stand Volume:**

**Habitat and wildlife use:**  
**Recreational opportunities:** Low  
**Potential for timber production:** Low because of extreme steepness  
**Potential for other uses:**  
**Water quality issues:** No water quality issues  
**Important natural features:** This is a very steep stand of Red spruce. It is visible and identifiable from many areas of the Mad River Valley

# MANAGEMENT PLANS FOR '6'

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**Landowner's objectives for this stand:** Let stand develop naturally

## **Silvicultural Prescription**

**Recommended silvicultural system:**

**Details of the silvicultural prescription:** No activity for this planning period

## **Planned Activities**

There are no activities for this stand.

## EXISTING CONDITIONS FOR STAND '7'

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<b>Land area:</b>	Land area: 43 Acres
<b>Landuse history:</b>	Little activity in the past because most of this stand is steep and not operable with traditional logging equipment. The soils are thin, ledges and rock outcrop are common.
<b>Forest Type:</b>	
- Existing	Red spruce-northern hardwood
- Potential	Montane yellow birch-red spruce
<b>Successional trend:</b>	This is a relatively high elevation hardwood-red spruce stand that typically has sugar maple and birch poles(both white and yellow) mixed with spruce and hardwood saplings. Spruce will likely become a larger part of the stand over time. Stand makeup is: 43% yellow birch, 24% sugar maple, 19% white birch and 5% red spruce, white ash and red maple.
<b>Forest health:</b>	Some ice damage in birch was noted.
<b>Site quality:</b>	Site index is 30 for red spruce. Site 3 and 4
<b>Approximate age:</b>	<b>Size class:</b> Poles (5.5 - 11.5")
<b>Trees per acre:</b> 504	<b>Mean Stand Diameter:</b> 5 in.
<b>Basal Area (BA):</b> 53	<b>Acceptable BA:</b> 10
<b>Growth Rate:</b>	<b>Timber Quality:</b> Low
<b>Stocking:</b>	Understocked - below C-line on mixedwood stocking guide
<b>Stand Volume:</b>	
<b>Habitat and wildlife use:</b>	Moose sign was evident on a few of the more accessible knolls and raptors may take advantage of isolated perches and rock outcrop.
<b>Recreational opportunities:</b>	Relatively few recreational opportunities because of terrain restrictions
<b>Potential for timber production:</b>	Low potential for timber production - high elevation, steep, rocky and somewhat remote.
<b>Potential for other uses:</b>	
<b>Water quality issues:</b>	No water quality issues of concern in this stand.

**Important natural features:**

Ledge outcrop with possible scenic vistas

## **MANAGEMENT PLANS FOR STAND '7'**

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**Landowner's objectives for this stand:**

Let stand develop naturally. There may be a few isolated sections of stand 7 that could be managed while working in Stand 1.

### **Silvicultural Prescription**

**Recommended silvicultural system:**

Uneven-aged management, favoring red spruce and yellow birch. Target maximum diameter is 14 inches. The desired cutting cycle is 50 years.

**Details of the silvicultural prescription:**

No activity in this planning period

### **Planned Activities**

**2011:**

GPS existing trails

**Priority:**

2

# EXISTING CONDITIONS FOR STAND '8'

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**Land area:** Land area: 61 Acres  
**Landuse history:**  
**Forest Type:**  
- **Existing** Spruce-hardwood  
- **Potential** Montane spruce/fir and yellow birch  
**Successional trend:**  
**Forest health:** Not field checked  
**Site quality:**

<b>Approximate age:</b>	<b>Size class:</b>
<b>Trees per acre:</b>	<b>Mean Stand Diameter:</b>
<b>Basal Area (BA):</b>	<b>Acceptable BA:</b>
<b>Growth Rate:</b>	<b>Timber Quality:</b>

**Stocking:**  
**Stand Volume:**

**Habitat and wildlife use:**  
**Recreational opportunities:** Some opportunity for hiking and other forms of extensive recreation  
**Potential for timber production:** Little or no potential for timber production  
**Potential for other uses:**  
**Water quality issues:** This stand includes the headwaters of the stream flowing to the beaver pond and shallow emergent marsh located in stand 5.  
**Important natural features:** Stand 8 contains over 3000 feet of ridgeline on the Northfield Mountain range with over 90% of the stand being above 2500 feet in elevation.

# MANAGEMENT PLANS FOR '8'

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**Landowner's objectives for this stand:** Let develop naturally

## **Silvicultural Prescription**

**Recommended silvicultural system:**

**Details of the silvicultural prescription:** No activity for this planning period

## **Planned Activities**

There are no activities for this stand.

# EXISTING CONDITIONS FOR STAND '9'

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**Land area:** Land area: 6 Acres  
**Land use history:** (?) Unknown  
**Forest Type:**  
- **Existing** Northern Hardwoods  
- **Potential** Spruce-northern hardwood  
**Successional trend:**  
**Forest health:** (?) Not field checked  
**Site quality:** Site 3

**Approximate age:** **Size class:**  
**Trees per acre:** **Mean Stand Diameter:**  
**Basal Area (BA):** **Acceptable BA:**  
**Growth Rate:** **Timber Quality:** Low

**Stocking:**  
**Stand Volume:**

**Habitat and wildlife use:** Good  
**Recreational opportunities:** Good  
**Potential for timber production:** Low potential for timber production - all above 2500 feet  
**Potential for other uses:**  
**Water quality issues:** Head water stream flowing to Felchner Brook  
**Important natural features:** None noted

# MANAGEMENT PLANS FOR '9'

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**Landowner's objectives for this stand:** Let develop naturally

## **Silvicultural Prescription**

**Recommended silvicultural system:**

**Details of the silvicultural prescription:** No activity for this planning period

## **Planned Activities**

There are no activities for this stand.

# SUMMARY TABLES

## Overview of Planned Activities

Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1										
3										
5										
7										

## Detailed plans by year

- 2010 -

UNIT	PRIORITY	ACTIVITY
All	1	Locate corners and mark boundaries

- 2011 -

UNIT	PRIORITY	ACTIVITY
1	2	GPS existing trails
5	2	GPS existing trails
7	2	GPS existing trails

- 2012 -

UNIT	PRIORITY	ACTIVITY
1	1	Uneven-aged harvest as marked by forester
3	1	Salvage/uneven-aged treatment

### Comparison of management units on the property

UNIT	ACRES	COVER TYPE	STAND DIAMETER	BASAL AREA	SILVICULTURAL SYSTEM
1	195	Northern Hardwoods	10 in.	98	Uneven aged mgmt. Maximum diameter 24 inches. Cutting cycle of 22 years.
2	53	Northern Hardwoods			Uneven aged mgmt. Maximum diameter 22 inches. Cutting cycle of 22 years.
3	98	Northern Hardwoods	11 in.	77	Uneven aged mgmt. Maximum diameter 22 inches. Cutting cycle of 22 years.
4	60	Mixedwood - paper birch/spruce	5 in.	122	Uneven aged mgmt. Maximum diameter 20 inches. Cutting cycle of 22 years.
5	124	Spruce-Hardwood - Special Treatment Area			
6	5	Red spruce			
7	43	Red spruce-northern hardwood	5 in.	53	Uneven aged mgmt. Maximum diameter 14 inches. Cutting cycle of 50 years.
8	61	Spruce-hardwood			
9	6	Northern Hardwoods			